James Kroll has spent 35 years debunking popular misconceptions about America's favorite big game animal – the white-tailed deer. Kroll, a.k.a. Dr. Deer, is a professor of forest wildlife and director of the Institute for White-tailed Deer Management and Research at Stephen F. Austin University in Nacogdoches.

He's a regular on hunting and deer management seminar tours and also on the North American Whitetail television series where he delivers concise information about wild deer, ending each segment with a signature phrase "I'm James Kroll and this is my world."

Kroll has helped landowners from the Gulf of Mexico to the Canadian border manage deer. His cutting edge research includes the use of infrared triggered cameras as early as the late 1970s.

Today, thousands of hunters use inexpensive digital cameras (more than 100 models are available) to census deer herds, identify target bucks and track their movements.

For years, Kroll's research assistants have followed deer equipped with telemetry collars. He set up one Louisiana study where the movements of telemetry animals were tracked by satellites and computers around the clock.

Kroll's telemetry work introduced terms like "staging area," "sanctuary" and "sign post" to the whitetail hunter's lexicon. He even coined the term "food plot" because he hated early references to hunting on "oat patches."

Kroll produced one of the first videos to educate hunters on how to age deer by observing body characteristics.

"It's very gratifying to hear modern hunters talk about seeing bucks of a certain age in the field," Kroll said. "In the old days, hunters looked at a deer long enough to identify him as a buck, then they shot him. Today's hunter is much more educated about the deer, and I'm pleased to have had something to do with that."

Sportsmen can follow Kroll's latest study involving a captive deer herd near Stephenville via the Deer Channel (www.deerchannel.com). The high-fenced study area is sprinkled with remote-control cameras that track deer movements. What makes the study unique is that some of the deer are also equipped with cameras that reveal what the deer sees.

"This is the first time we've been able to see the world through a deer's eyes," Kroll said. "The prospects are intriguing. One thing we've already discovered is that a deer can hold its head very still, even when the deer is running. The camera image from a running deer is not the bouncing image you get when a human runs with a camera."

Not just an academic researcher, Dr. Deer is also an ardent deer hunter. With one week to go before deer season begins for most Texas hunters, here are some of the lessons Kroll has learned in 35 years of research:

■ **Scent lures don't work:** Kroll's research indicates that deer are curious animals that may stop to investigate a new odor in their home territory, but the deer are just as likely to be attracted to human urine or the interior smell of a new car than any commercially marketed sex lure. Sex lures are billed as urine from an estrous doe.

■ **Scent containment products work to a degree:** None is capable of totally hiding the human odor from a whitetail's incredible nose.

"Wind direction is important in where you set up to hunt deer, but it's also important in how you travel to your stand location, Kroll said.

"All the scent-killer products help, but the best I've ever used is skunk scent. Skunk scent works by totally overpowering every other smell. The main thing is to stay downwind of the deer."

■ **Moon phase no factor:** There's no relationship between moon phase and daytime deer movement. Most hunters believe that hunting is poor on a full moon because the deer can see better at night when the moon is bright and the deer feed all night, then lay up during daylight hours.

"There is a correlation between the full moon and the peak whitetail rut," Kroll said. "In a healthy deer herd, the peak of the rut tends to occur three to five days after the full moon."

■ **Hunt all day:** The best time to kill a mature buck is midday. Kroll says that deer do a better job of patterning hunter movement than vice versa. Since most hunters are in their stands the first two hours of daylight and the last two hours of daylight, mature bucks often move at midday.

"I'm amazed at how anxiously hunters await the deer season, then they only hunt four hours a day," Kroll said. "Hunt all day and you'll be surprised how many more deer you will see."

■ **Weather affects movement:** A changing barometer affects deer movement. Deer have an uncanny ability to anticipate weather changes and Kroll attributes this sixth sense to barometric pressure.

"Deer in the North move and feed more actively when the weather gets bitterly cold," Kroll said. "Northern deer have to feed more to keep their energy level up because the weather may stay cold for weeks, or even months. Cold weather causes Southern deer to hunker down and wait for a warm-up."

■ **Look for rub lines:** Ignore the breeding scrapes made by bucks and concentrate on rub lines that can be followed and mapped to determine how bucks move through their home range.

If hunters identify the rub lines where deer mark their territory by rubbing their antlers against bushes or trees, Kroll said, they will know where the deer move through their terrain year after year.

In a Michigan study, all the deer were removed from a high-fenced area and the enclosure had no deer for three years. Deer were then restocked into the area. Some of the stocked deer came from other states. Bucks in the new deer herd immediately began using the same rub lines as their predecessors.

■ **Don't worry about genetics:** The three keys to quality deer management are age, nutrition and genetics. Kroll said most hunters and deer managers should ignore genetics and focus on providing deer with nutrition and allowing the bucks to reach maturity.

"There's no point in worrying about genetics," he said. "In 1905, one whitetail buck and eight does were stocked on New Zealand's Stewart Island. A hundred years later, hunters are killing 1,500 whitetails a year at Stewart Island and those deer, which came from just nine ancestors, show just as much genetic diversity as any deer herd in America. Every deer herd has good genetics."

■ **Deer develop differently:** A yearling spike buck stands just as good a chance of growing into a quality buck as a yearling counterpart with six, eight or 10 points. Kroll made that determination after an 11-year study of free-ranging whitetails.

"Deer are like people," he said. "They develop at a different pace. The kid who is smaller than his classmates in the first grade may be the biggest kid in his graduating class. Besides, young bucks disperse from their home territories at an early age. In our spike buck study, we were only able to recapture 12 percent of the bucks that we collared. The others wound up on the neighbor's ranch. The neighbor gets your bucks and you get his bucks."

■ **Grunt work:** Deer are much more vocal than most hunters think. "I've heard hunters talk about overcalling deer, but we've got a buck in the Deer Channel project that walks around grunting all the time," Kroll said. "If you heard the sounds that particular deer makes, you'd think it was the worst grunt call you'd ever heard."

■ **Some things unexplainable:** North American whitetails respond to stimuli that researchers cannot explain. Kroll has done studies that show simultaneous movement of whitetails in Michigan and Navasota, Texas. Last year, when a drought left Texas deer in poor physical condition, the breeding activity occurred 12 days later than normal. Kroll says the same phenomenon was reported throughout the country. Moreover, commercial deer breeders had poor success last year with artificial insemination efforts, despite the fact that penned deer receive all the nutritious food they want.

"We will never know everything there is to know about whitetails," Kroll said. "That's what makes them the world's greatest game animal."